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EXAMINER

KRUER, KEVIN R

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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1773

DATE MAILED: 02/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/729,587

Applicant(s)

SHIVELY ET AL.

Examiner

Kevin R. Kruer

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on November 1, 2005 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-16 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 01/68360 (herein referred to as Valinski) in view of Levchik et al (US 6,569,928),

Valinski teaches a sunshade comprising first and second PET layers (Figure 4), herein relied upon to read on the claimed "two polymeric film layers." The second base layer may have a light reflecting metal layer provided on the inside surface thereon which partly transmits visible light (page 11, lines 5+). Said light reflecting layer (herein relied upon to read on the claimed "metallized layer") comprises an aluminum layer and

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transmits 50% or less visible light (example 4 and page 4, lines 5+). Said teaching is herein understood to be sufficiently specific to anticipate the claimed light transmittance in claims 2 and 3. The light-reflecting layer is adhered to the surface of the transparent substrate with an adhesive (see Figures). The second base layer may be provided with a protective layer (Figure 4) that is herein relied upon to read on the claimed scratch resistant coating of claim 10. The PET layers may comprise UV light absorbers (page 11, lines 12+) herein relied upon to read on the claimed UV absorbing material. The layers of said window shade may be adhered via an adhesive that comprises tetrabromobisphenol-A fire retardant in a thermoset polyester urethane composition (abstract). The adhesive has a haze of less than 25% (page 7, lines 5+). The dried adhesive may comprise 2-15wt% fire retardant (see example 1).

Valinski does not teach that the polyester layers should comprise a fire retardant. However, Levchik teaches that resorcinol bis(diphenyl phosphate) may be added to polyester compositions in order to improve the fire retardency thereof (abstract). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to add resorcinol bis(diphenyl phosphate) to the PET layers taught in Valinski. The motivation for doing so would have been to improve the sunshade's fire retardance.

4. Claims 17, 19, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 01/68360 (herein referred to as Valinski) in view of Levchik et al (US 6,569,928), as applied to claims above, and further in view of Fuchs et al (US 5,740,649).

Valinski in view of Levchik is relied upon as above, but does not teach that the sunshade may be perforated. However, Fuchs teaches that it is known in the art to make a foil "sound permeable" by making a multiplicity of small holes/perforations therein (col 5, lines 18+). The perforations may be spaced 1.2mm from each other (col 7, line 47). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to put micro-perforations into the sunshade taught in Valinski at a spacing of 1.2mm. The motivation for doing so would have been to make the sunshade sound absorbing.

5. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over WO 01/68360 (herein referred to as Valinski) in view of Levchik et al (US 6,569,928), as applied to claims above, and further in view of Jablonka et al (US 4,555,433).

Valinski in view of Levchik is relied upon as above, but does not teach that the sunshade should be formed with a plurality of adjacent cup shaped recesses arranged in the form of a grid. However, Jablonka teaches that forming a element with a plurality of adjacent cup shaped recesses arranged in the form of a grid makes said material sound deadening (abstract). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to form the sunshade taught in Valinski with a plurality of adjacent cup shaped recesses arranged in the form of a grid. The motivation for doing so would have been to provide said sunshade with sound deadening properties.

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6. Claims 1-7, 9, 10, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inanuma et al (US 4,978,181) in view of Levchik et al (US 6,569,928), Pengilly et al (US 4,185,046), and Mitsuishi et al (US 4,115,617).

Inanuma teaches a sunshade comprising a transparent substrate and first and second base layers provided on either surface of the substrate (abstract). Said first and second base layers may comprise PET (col 3, line 8, and col 3, line 37), and are herein relied upon to read on the claimed "two polymeric film layers." The second base layer may have a light reflecting layer provided on the inside surface (col 3, line 44) thereon which partly transmits visible light (abstract). Said light reflecting layer (herein relied upon to read on the claimed "metallized layer") comprises an aluminum layer and transmits 50% or less visible light (col 3, lines 41). Said teaching is herein understood to be sufficiently specific to anticipate the claimed light transmittance in claims 2 and 3. The light-reflecting layer is adhered to the surface of the transparent substrate with an adhesive (col 3, line 45). The second base layer may be provided with a protective layer (abstract) that is herein relied upon to read on the claimed scratch resistant coating of claim 10. The laminate may further comprise a UV reflecting layer, herein relied upon to read on the claimed UV absorbing material.

Inanuma does not teach that the polyester layers should comprise a fire retardant. However, Levchik teaches that resorcinol bis(diphenyl phosphate) may be added to polyester compositions in order to improve the fire retardency thereof (abstract). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to add resorcinol bis(diphenyl phosphate) to the PET

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layers taught in Inanuma. The motivation for doing so would have been to improve the sunshade's fire retardance.

Inanuma also does not teach the claimed adhesive composition. However, Pengilly teaches a flame retardant adhesive to be utilized with polyethylene terephthalate films. The adhesive comprises a polyester adhesive and a flame retardant comprising a brominated based compound (col 1, lines 44-col 2, line18). The fire retardant is included in amounts of 10-50wt% (col 2, lines 56+). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the adhesive taught in Pengilly as the adhesive of the laminate taught in Inanuma. The motivation for doing so would have been to improve the flame retardance of the laminate.

Inanuma also does not teach that the PET layers may comprise a UV absorber. However, Mitsuishi teaches PET has the defect that when it is exposed to sunlight for long periods of time, its mechanical properties are markedly deteriorated (col 1, lines 17+). In order to improve the weather resistance of the PET, it has been known to incorporate an ultraviolet absorber in the film. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate an UV absorber into the PET layers taught in Inanuma in order to improve their weatherability.

The examiner takes the position that the claimed haze and light transmittance are inherent to the laminate taught in Inanuma because said laminate comprises the same layers comprising the same compositions as the claimed laminate.

7. Claims 1-7, 9, 10, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inanuma et al (US 4,978,181) in view of Levchik et al (US 6,569,928), Mitsuishi et al (US 4,115,617) and WO01/68360 (herein referred to as Valinski).

Inanuma teaches a sunshade comprising a transparent substrate and first and second base layers provided on either surface of the substrate (abstract). Said first and second base layers may comprise PET (col 3, line 8, and col 3, line 37), and are herein relied upon to read on the claimed "two polymeric film layers." The second base layer may have a light reflecting layer provided on the inside surface (col 3, line 44) thereon which partly transmits visible light (abstract). Said light reflecting layer (herein relied upon to read on the claimed "metallized layer") comprises an aluminum layer and transmits 50% or less visible light (col 3, lines 41). Said teaching is herein understood to be sufficiently specific to anticipate the claimed light transmittance in claims 2 and 3. The light-reflecting layer is adhered to the surface of the transparent substrate with an adhesive (col 3, line 45). The second base layer may be provided with a protective layer (abstract) that is herein relied upon to read on the claimed scratch resistant coating of claim 10. The laminate may further comprise a UV reflecting layer, herein relied upon to read on the claimed UV absorbing material.

Inanuma does not teach that the polyester layers should comprise a fire retardant. However, Levchik teaches that resorcinol bis(diphenyl phosphate) may be added to polyester compositions in order to improve the fire retardency thereof (abstract). Therefore, it would have been obvious to one of ordinary skill in the art at the

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time the invention was made to add resorcinol bis(diphenyl phosphate) to the PET layers taught in Inanuma. The motivation for doing so would have been to improve the sunshade's fire retardance.

Inanuma also does not teach the claimed adhesive composition. However, Valinski teaches a flame retardant optical adhesive for fabricating flame retardant composite films for use as window shades (abstract). The adhesive comprises tetrabromobisphenol-A fire retardant in a thermoset polyester urethane composition (abstract). The adhesive has a haze of less than 25% (page 7, lines 5+) and is useful for bonding Pet to metal layers (page 9, lines 5+). The dried adhesive may comprise 2-15wt% fire retardant (see example 1). Thus, it would have been obvious to one of ordinary skill in the art to utilize the adhesive taught in Valinski as the adhesive taught by Inanuma because said adhesive is will result in a fire retardant shade.

Inanuma also does not teach that the PET layers may comprise a UV absorber. However, Mitsuishi teaches PET has the defect that when it is exposed to sunlight for long periods of time, its mechanical properties are markedly deteriorated (col 1, lines 17+). In order to improve the weather resistance of the PET, it has been known to incorporate an ultraviolet absorber in the film. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate an UV absorber into the PET layers taught in Inanuma in order to improve their weatherability. The examiner takes the position that the claimed haze and light transmittance are inherent to the laminate taught in Inanuma because said laminate comprises the same layers comprising the same compositions as the claimed laminate.

Response to Arguments

Applicant's arguments filed November 1, 2005 have been fully considered but they are not persuasive.

Applicant argues the prior art does not disclose a composite containing a UV absorber in a film layer arranged outwardly of the fire retardant containing adhesive. The examiner notes the newly applied Valinski reference does teach a UV absorber in a film layer arranged outwardly of the fire retardant containing adhesive. With regards to the rejections based upon Inanuma, the examiner concedes Inanuma does not teach all of said limitations. However, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). The examiner maintains the position that one of ordinary skill in the art at the time the invention was made, given the teachings of the relied upon references as a whole, would have been motivated to make the claimed invention.

Applicant further argues the examiner has totally ignored the fact that the UV material is provided in a specified layer in relation to the FR containing layer. The examiner respectfully disagrees. Valinski anticipates the addition of a UV absorber to the PET layers adjacent to the fire retardant containing layers. With regard to the rejections based upon the teachings of Inanuma, the prior art relied upon by the examiner would have motivated one of ordinary skill in the art to put the UV absorber in a specified layer; the PET layers. Applicant argues the layer to which the UV absorber

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is added prevents the FR material used in the composite from yellowing or bronzing on aging. It is believe applicant is arguing an unexpected result is observed in the claimed invention, in which case Applicant must provide evidence establishing said result is observed and unexpected.

According to applicant, the problem with FR containing composites is not disclosed in any of the cited art. The examiner respectfully disagrees. Valinski teaches the problem of FR containing composites, as does Pengilly. The examiner further notes applicant teaches such a problem is known in the art (top of page 3 in the specification).

Applicant further argues they can demonstrate that the incorporation of FR materials into the adhesives of the type disclosed in Pengilly gives rise to high levels of haze that is unacceptable in transparent composites. The examiner initially notes counsel's arguments cannot take the place of evidence. Since no evidence has been supplied to the Office, said argument cannot be fully considered. The examiner further notes that Pengilly discusses the problems associated with the use of FR in an adhesive and states the adhesive can be somewhat hazy due to the presence of FR. To avoid hazing, Pengilly pre-selected the amount of FR added to the adhesive in order to control the haze of the adhesive.

With regard to Pengilly, Applicant argues the composite is opaque due to the aluminum foil and the document is silent on the optical properties of the composite and the use of a UV absorber. Applicant's arguments are noted. However, Pengilly was never relied upon to teach a transparent substrate, the claimed optical properties or the use of a UV absorber. In response to applicant's arguments against the references

individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Applicant further argues that there is no disclosure in Levchik that the adhesive may contain FR. The examiner notes that Levchik is a secondary reference that is relied upon to modify the teachings of Inanuma. Levchik was never relied upon to teach the claimed composite, the claimed optical properties, the use of a FR in the adhesive, or the use of a UV absorber. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Applicant further argues that the presence of a FR in the PET film alone is not sufficient to provide a composite shade that meets the most stringent FR requirements. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., FR requirements) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

For the reasons noted above, the rejections are maintained.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin R. Kruer whose telephone number is 571-272-1510. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on 571-272-1284. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Kevin R. Kruer
Patent Examiner-Art Unit 1773